

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed September 17, 2004. Through this response, independent claims 1 and 28 have been amended, and claims 18, 19, and 29-38 have been cancelled without prejudice, waiver, or disclaimer. Claims 1-11, 13-17, 20-25, and 28 remain pending. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

I. Objection to Claims

According to the Office Action, claims 19 and 25 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants appreciate the Examiner's statement that claims 19 and 25 would be allowable.

Applicants have cancelled claims 18 and 19, and have amended claim 1 to incorporate the limitations of claims 18 and 19. Since the claim amendments have resulted in allowable claims, Applicants respectfully request that the objection be withdrawn.

II. Claim Rejections Under 35 USC § 112

Claims 33-37 have been rejected under 35 USC § 112, second paragraph, according to the following reasons stated in the Office Action:

Claims 33-37 are rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 33, there is no support for the recited "first cascode transistor pair".

Claims 34-37 are rejected as including the indefiniteness discussed above with claim 33.

Applicants have cancelled claims 33-37, and thus the rejection to the same is rendered moot.

III. Rejection of Claims 28-30 and 32-38 Under 35 USC § 102 (b)

A. Statement of the Rejection

Claims 28-30 and 32-38 are rejected under 35 U.S.C. Section 102(b) as allegedly being anticipated by *Kawasaki* (U.S. Pat. No. 5,955,904). Applicants have cancelled claims 30-38, and thus the rejection to the same is rendered moot. Independent claim 28, which incorporates the limitations of claim 29, will be addressed below. As pertaining to independent claim 28, Applicants respectfully traverse this rejection.

B. Discussion of the Rejection

It is well established at law that, for a proper rejection of a claim under 35 U.S.C. §102(b) as being anticipated based upon a single reference, the reference must disclose, teach, or suggest, either implicitly or explicitly, all elements/features/steps of the claim at issue. *See, e.g., In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

In the present case, not every feature of the claimed invention is represented in the *Kawasaki* reference.

Independent Claim 28

As recited in independent claim 28, Applicants claim (with emphasis added):

28. A method of *pumping a charge in a semiconductor based charge pump* for use in a phase lock loop circuit, comprising:
receiving first and second input signals at first and second switching transistors *provided in the charge pump*;
providing a substantially constant reference voltage to first and second complementary transistors to reduce coupling noise from the first and second switching transistors, wherein the complementary transistors change states between off and on substantially complementary to the state of the respective first and second switching transistors;
generating a first output signal from the second complementary transistor;
and
filtering noise from the reference signal to provide a second output signal to a voltage-to-current converter.

Applicants respectfully submit that *Kawasaki* does not disclose the emphasized features. The Office Action refers to FIGS. 3-5 of *Kawasaki*, and in particular, equates the claimed features with features provided in two differential amplifiers 42 and 52 that are implemented in two separate circuits (a clock input circuit 16 and a clock-enable-signal input circuit 20, respectively). The two separate circuits do not comprise a charge pump, nor a method for pumping charge into the same.

Further, *Kawasaki* does not disclose outputting a filtered reference signal to a voltage-to-current converter. Because *Kawasaki* fails to recite these and the above claimed features, Applicants respectfully request that the rejection to independent claim 28 be withdrawn.

IV. Claim Rejections - 35 U.S.C. § 103(a)

A. Rejection of Claims 1-11, 13-18, 20-24, 28-30 and 32-38

Claims 1, 8-11, 13-18, 20-24, 28-30 and 32-38 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Lee et al.* ("*Lee*," U.S. Pat. No. 5,889,437) in

view of *Abdi et al.* ("*Abdi*," U.S. Pat. No. 5,722,052). Claims 2-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lee* in view of *Abdi* and *Ahashi*. Applicants traverse these rejections, and believe the rejections to be moot in light of the current amendments.

B. Discussion of the Rejection

As has been acknowledged by the Court of Appeals for the Federal Circuit, the U.S. Patent and Trademark Office ("USPTO") has the burden under section 103 to establish a proper case of obviousness by showing some objective teaching in the prior art or generally available knowledge of one of ordinary skill in the art that would lead that individual to the claimed invention. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Accordingly, to make a proper case for obviousness, there must be a prior art teaching or established knowledge that would suggest to a person having ordinary skill in the pertinent art to fill the voids apparent in the applied reference. It is respectfully asserted that no such case has been made in the outstanding Office Action.

Claims 1-11, 13-17, 20-25

Applicants have amended independent claim 1 to incorporate the limitations of previous claims 18 and 19, which according to the Office Action results in allowable claims. Applicants respectfully request that the rejection to independent claim 1 be withdrawn, as the aforementioned amendment has placed claim 1 in condition for allowance. Because claims 2-11, 13-17, and 20-25 include the limitations of allowable claim 1, claims 2-11, 13-17, and 20-25 are allowable as a matter of law.

Claims 28, 30, and 32-38

With regard to independent claim 28, neither *Abdi* nor *Lee*, alone or in combination, disclose, teach, or suggest *filtering noise from the reference signal to provide a second output signal to a voltage-to-current converter*, as recited in independent claim 28. As indicated in the Office Action, *Lee* does not disclose a reference signal, and *Abdi* does not teach filtering noise from a reference signal to provide a second output signal to a voltage-to-current converter. Thus, Applicants respectfully request that the rejection to claim 28 be withdrawn.

With regard to independent claim 30 and dependent claims 32-38, Applicants have cancelled these claims and thus the rejection to the same has been rendered moot.

V. Cancelled Claims

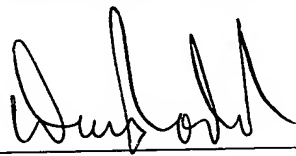
As identified above, claims 18, 19, and 29-38 have been cancelled from the application through this response without prejudice, waiver, or disclaimer. Applicants reserve the right to present these cancelled claims, or variants thereof, in continuing applications to be filed subsequently.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully assert that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-11, 13-17, 20-25, and 28 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

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